

THE AMERICAN MINERALOGIST

Editor

EDGAR T. WHERRY, Bureau of Chemistry, Washington,
D. C.

Associate Editors

SAMUEL G. GORDON,	Academy of Natural Sciences, Philadelphia, Pa.
EDWARD H. KRAUS,	University of Michigan, Ann Arbor.
GEORGE F. KUNZ,	New York Mineralogical Club.
ALEXANDER H. PHILLIPS,	Princeton University, New Jersey.
AUSTIN F. ROGERS,	Stanford University, California.
WALDEMAR T. SCHALLER,	U. S. Geological Survey, Washington, D. C.
THOMAS L. WALKER,	University of Toronto, Ontario, Canada.
HERBERT P. WHITLOCK,	American Museum of Natural History, New York City.

Business Manager

HARRY W. TRUDELL, 2030 E. Madison St., Philadelphia,
Pa.


VOLUME 4, 1919

Reprinted with the permission of the original publishers

KRAUS REPRINT CORPORATION

New York

1966



Digitized by the Internet Archive
in 2023

Printed in U.S.A.

https://archive.org/details/american-mineralogist_1919_4_indexcontents

CONTENTS OF VOLUME 4.

No. 1, JANUARY

	PAGE
Glauberite crystal-cavities in the Triassic rocks in the vicinity of Gettysburg, Pa.....George W. Stose	1
Notes: Barite from Great Notch, N. J.....Ernest H. Wilson	4
Famous mineral localities: The datolite locality near Westfield, Mass. Earl V. Shannon	5
Editorial, proceedings of societies, abstracts.....	7

No. 2, FEBRUARY

Crystallography of some Canadian minerals. Albite, titanite, scapolite, and polycrase.....Eugene Poitevin	11
Newspaper mineralogy.....	13
Developing crystallized mineral specimens...Wallace Goold Levison	14
Book review—Handbook of Mineralogy, etc., Butler.....	15
Notes and news, proceedings of societies, abstracts.....	15

No. 3, MARCH

Famous mineral localities: Beryl Hill, Grafton, New Hampshire. George M. Flint	21
Crystallography of some Canadian minerals: stephanite, epidote, and calamine.....Eugene Poitevin	22
Book review: A text-book of precious stones, Wade.....	26
Proceedings of societies, notes and news, new minerals, abstracts.....	26

No. 4, APRIL

Pyrite crystals from Broadway and 207th St., N. Y. City. Herbert P. Whitlock	31
Crystallography of some Canadian minerals: Axinite.Eugene Poitevin	32
Famous mineral localities: The Pelham asbestos mine, Mass. Earl V. Shannon	37
Notes and news, proceedings of societies, new minerals, abstracts.....	39

No. 5, MAY

The new mineralogical laboratory at the University of Michigan. Edward H. Kraus	45
Crystallography of some Canadian minerals: Cerussite. Eugene Poitevin	56
Proceedings of societies, new minerals, notes and news, abstracts.....	59

No. 6, JUNE

Tridymite crystals in glass.....N. L. Bowen	65
Pyrite crystals from Bald Mt., Colorado.....Herbert P. Whitlock	67
Limonite pseudomorphous after pyrite from York County, Pa. E. F. Holden	68
Famous mineral localities: The Chester emery mine. Earl V. Shannon	69
The Thomas F. Lamb collection.....Edward Wigglesworth	73
Proceedings of societies, notes and news, new minerals, abstracts.....	74

No. 7, JULY

	PAGE
Stalactitic barite from Madoc, Ontario.....T. L. Walker	79
Manganotantalite from Amelia, Virginia...O. I. Lee and E. T. Wherry	80
Amber and its origin.....George F. Black	83
Sir William Crookes.....George F. Kunz	85
Notes and news, proceedings of societies, new minerals, abstracts.....	88

No. 8, AUGUST

Linarite and leadhillite from Idaho.....Earl V. Shannon	93
Fluorite from Madoc, Ontario.....T. L. Walker	95
Amber and its origin.....George F. Black	97
Reminiscences of William E. Hidden.....George F. Kunz	100
Notes and news, proceedings of societies, new minerals, abstracts.....	99

No. 9, SEPTEMBER

The minerals of the Bergen Archways.....James G. Manchester	107
Chalcopyrite crystals from the Bergen Archways...Edgar T. Wherry	116
Amber and its origin.....George F. Black	118
New minerals, notes and news.....	120

No. 10, OCTOBER

A columbite crystal from Boothwyn, Pa.....Isabel F. Smith	121
Monazite from Boothwyn, Pa.....Edgar T. Wherry	123
A new occurrence of rhodonite.....Wilbur G. Foye	124
Hematite and rutile formed by the action of chlorine at high temperatures H. E. Merwin and J. C. Hostetter	126
William Earl Hidden.....George F. Kunz	128
Amber and its origin.....George F. Black	130
Notes and news, new minerals, abstracts.....	131

No. 11, NOVEMBER

Colemanite pseudomorphous after inyoite from Death Valley, California. Austin F. Rogers	135
A mineralogical trip in France.....Alfred C. Lane	140
William Earl Hidden.....George F. Kunz	142
Proceedings of societies, new minerals, abstracts.....	147

No. 12, DECEMBER

Famous mineral localities: Yuma County, Arizona..William F. Foshag	149
Books, proceedings of societies, new minerals, notes and news.....	150

PLATES

1. Glauberite crystal cavities... 1	9. New York City minerals... 93
2. New York City minerals... 11	10. The Bergen Archways..... 107
3. Large beryl crystals, Grafton. 21	11. Minerals of Bergen Archways 111
4. Pyrite crystals, N. Y. City... 31	12. Same as preceding..... 112
5. Natural Sci. Bldg. Univ. Mich. 45	13. Same as preceding..... 114
6. Room and laboratory in above. 52	14. Minerals from Boothwyn, Pa. 121
7. Tridymite in glass; quartz... 65	15. Colemanite pseudo. inyoite. 135
8. Stalactitic barite, Madoc, Ont. 79	16. New York City minerals... 149

INDEX TO VOLUME 4

Original articles are in **bold face type**; abstracts and cross references in ordinary type.

	PAGE		PAGE
Achtaragditc.....	44	Arrangement of atoms in tung-	
Actinolite.....	38, 106	sten (Debye).....	18
Adams, Elliot Q. Fundamental		Arsenopyrite.....	152
polyhedron of diamond.....	18	Asbestos.....	37, 145
—, See also Wherry, E. T.		Ashby, Mr. George E. [Min. ex.]	60
Albite.....	11, 91, 124, 125, 151	Assignment of crystals to sym-	
Alger, Mr. Francis [Gifts from].	21	metry classes (Wherry).....	134
Algodonite and whitneyite (Borg-		Atomic structure of carborun-	
ström).....	91	dum determined by X-rays	
Allanite.....	42	(Burdick and Owen).....	148
Allen, Mr. R. M. [Minerals ex-		Auerlite.....	142
hibited by].....	60	Augite.....	11, 104
Alteration of dolomite (Young). 20		Australian minerals.....	133
Aluminium, crystal structure.. 19		Autunite.....	124, 133
Alums, crystal structure..... 103		Axinite, 32; — veins in por-	
Amber and its origin (Black)		phyrite (Sargent).....	78
83, 97, 118, 130		Azurite.....	93, 146
American occurrence of peri-		Baddeleyite.....	41
clase; origin of calcite-brucite		Barite 79, 92, 95, 106, 134, 141, 147, 150	
rocks (Rogers).....	43	— deposits, Mo. (Tarr).....	106
Amesite.....	71	Barite, Great Notch, N. J. (Wil-	
Amethyst.....	6, 73	son).....	4
Analcite.....	42, 103, 112	Bates, Mr. A. C. [Paper by]....	40
Analyses, Venetian minerals		Bauer, Max [Obituary].....	127
(Billows).....	42	Bayley, W. S. Descriptive Min-	
Analysis of minerals of rarer		eralogy [Book].....	88
elements [Book] (Schoeller)... 150		Beckenkamp, J. Structures.....	18
Andalusite.....	59, 74	Becker, George F. [Obituary]. 88	
Anderson, C. Carbonaceous min. 106		Bement, Mr. C. S. [Gifts].....	39, 44
Anglesite.....	44, 89, 102, 147, 150	Benge, Mr. Elmer [Min. exhib.] 102	
—, Coeur D'Alene District,		Benson, W. N. Origin, serpentine 44	
Idaho (Shannon).....	147	Beraunite.....	145
Anhydrite in blocks of lava of		Bertrandite.....	73
Stromboli (Ponte).....	42	Berwerth, Friedrich [Obituary]. 88	
Ankerite [incl. mesitite].....	41	Beryl .26, 29, 44, 73, 78, 106, 124, 131	
Anon. X-rays and structure of		Beryl Hill, Grafton, N. H.	
crystd. and amorph. carbon.. 10		(Flint).....	21
Anthophyllite.....	38, 77	Bibliography, N. A. Geology,	
Anthroxolite.....	106	1916 (Nickles), 62; for 1917.. 103	
Antigorite.....	43	Bichowsky, F. R. Sulfur crystal 78	
Apatite.....	73, 106, 120, 132, 133	Biernbaum, Mr. M. G. [Re-	
Apgar, F. W. See Thomas, K.		port by].....	89
Aphrodite.....	63	Billows, E. Anal. Venetian min.. 42	
Apophyllite.....	74, 92, 102, 103, 115	Biotite, 38, 70, 71, 104, 106, 120,	
Apparatus for growing crystals		124, 134, 142	
under control (Hostetter).... 147		Bismuth, atoms, 10;—minerals	
Approximate determination of		Transbaikalia (Nenadkevich). 29	
minerals in concentrates		Bismuthinite, 152; ps. molybde-	
(Thomas and Apgar).....	62	nite.....	91
Aquamarine, see beryl.		Bismutite.....	124
Aragonite.....	44, 70, 75, 145	Black, George F. Amber and its	
Arduinite.....	42	origin.....	83, 97, 118, 130
Arizona: Yuma Co. localities... 149			

- Black sulfur (Neumann)..... 43
 Blake, John M. Crystal drawing 133
 Solving crystal prob.. 44
 Boeke, Dr. H. E. [Obituary].... 152
 Borden, Gail, collection..... 15
 Borgström, L. H. Algodonite
 and whitneyite..... 91
 Boron, volcanic exhalations.... 133
 Bort..... 92
 Bowen, Dr. N. L. [Positions].. 16
Bowen, N. L. Tridymite crystals in glass..... 65
 Boyle, Mr. J. C. [P.M.S.] 26, 40, 60
 Branner, J. C. [Translation by] 41
 Brazilite..... 104
 British Educational Mission.. 15
 Broadwell, Mr. Wm. H. [Paper] 40
 Brucite..... 43, 148
 Brun, A. Boron, lithium, thallium..... 133
 Thioarsenides, Binnenthal..... 133
 Brusoni, A. Zebedassite, new mineral..... 120
 Buddington, Dr. A. F. [Position] 152
 Burdick, A. J. Chem. tests [Book] 88
 Burdick, C. L., and Owen, E. A.
 At. structure, carborundum.. 148
 Burgess, J. A. Halogen salts of
 of silver, Wonder, Nevada.. 42, 132
 Burgin, Dr. Herman [Papers by]
 17, 26, 75; Pres. P.M.S..... 151
 Burrage, Mr. Albert C. [Gift]. 39
 Butler, Prof. G. M. [Method]. 75
 Handbook, Mineralogy, etc..... 15
 Byssolite..... 145
 Cacozenite..... 145
 Calamine..... 24, 44, 63, 89
 Calcite, 5, 6, 11, 12, 18, 20, 30, 32,
 42, 59, 61, 72, 74, 79, 90, 92, 95,
 105, 106, 111, 132, 134, 145, 148, 150
 Calcium carbonates, structure.. 18
 Calculation of rational analysis
 of clays (Washington)..... 104
 California: brucite, 43; chondro-
 dite, 43; colemanite pseudo-
 inoite, 135; glauberite, 1;
 meyerhofferite, 139; periclase,
 43; pyrrhotite, 43; rubel-
 lite, 26; spinel, 43; strontianite 42
 Camsell, Mr. Charles [Min. coll.] 32
 Canada: albite, 11, 91; axinite,
 32; barite, 79, 147; bismuthin-
 ite pseudo. molybdenite, 91;
 calamine, 24, 63; calcite, 30,
 79; cerussite, 56, 63; colerain-
 ite, 63; epidote, 24; epsomite,
 105; ferrierite [new], 90; flu-
 orite, 79, 95; goethite, 41; lim-
 onite, 41; phenacite, 91; poly-
 crase, 13; saponite, 91; scapol-
 ite, 13; silver, 26; stephanite,
 22; thaumasite, 91; thenar-
 dite, 105; titanite, 12; turgite. 41
 Cancrinite..... 73
 Carbon, structure..... 10
 Carborundum, dispersion, etc... 20
 structure..... 148
 Carnotite..... 44, 133, 134, 146
 Cassiterite..... 73, 106
 Catalano, L. R. Titanium min. 104
 Cerussite..... 56, 63, 89, 93, 102
 Chabazite..... 26, 102, 103
 Chalcedony..... 90, 141, 150
 Chalcopyrite..... 18, 43, 44, 110, 145
**Chalcopyrite crystals from Ber-
 gen Archways (Wherry)..... 116**
 Chalcotrichite, see cuprite.
 Changing plane of gnomonic pro-
 jection, etc. (Hilton)..... 30
 Chemical composition of melano-
 phlogite (Manzella)..... 63
 meteorites, Ama-
 na and Eagle Station (Prior). 30
 notes on davidite (Cooke) 134
 study, titanium mineral,
 San Juan (Catalano)..... 104
 tests for minerals [Book]
 (Burdick)..... 88
 Chert, formation of..... 62
 Chester emery mine (Shannon). 69
 Chiasolite. See andalusite.
 Childrenite..... 73
 Chinmayanandam, T. K. Haid-
 inger's rings on mica..... 78
 Chlorite..... 61, 132, 145
 Chondrodite..... 43, 90
 Chrysoberyl..... 124
 Chrysocolla..... 148
 Chrysolite, see olivine.
 Chubutite, new lead min. (Corti) 103
 (Rimann)..... 103
 Cinnabar, twin crystal specimen. 44
 Classification of mimetic crystals
 (Wherry and Adams)..... 78
 Clay, R. S. Determining re-
 fractive indices..... 20
 Clays, 38; calculation of rational
 analysis of..... 104
 Cleavage angle in random sec-
 tion of crystal (Hilton)..... 30
 Clinoenstatite..... 63
 Cocinerite, new mineral..... 146
 Cole, G. A. J. Rhythmic de-
 position of flint..... 29
**Colemanite pseudomorphous
 after inyoite from Death Val-
 ley, California. (Rogers).... 135**
 Colerainite, origin..... 63
 Collection of minerals in the
 American Museum of Natural
 History [Leaflet] (Whitlock). 96

Colomba, L. Cyanotrichite and diopside from Traversella.	19	Cyrtolite.	143
Colorado: covellite, 78; pyrite, 67; zinc ores, oxidized.	64	Danburite.	44
Colton, Charles A. [President Newark Min. Soc.].	152	Datolite.	6, 113
Columbite, . . . 80, 81, 106, 124, 125		Datolite locality near Westfield, Mass., The (Shannon).	5
Columbite crystal from Boothwyn, Pa., A. (Smith).	121	Davidite.	133, 134
Common minerals [Book] (George).	89	Dean, R. S. Formation of chert.	62
Composition, pyroxene (Doelter).	20	Debye, P. Atoms in tungsten.	18
Connecticut: rhodonite, etc.	124	— and Scherrer, P. Interferences in Roentgen light.	9
Connellite.	64	Deposit of stibnite and pyrite in Sardinia (Lincio).	63
Contribution to mineralogy of boron, lithium, thallium, in volcanic exhalations (Brun).	133	Derby, Orville A. [Orvillite].	41
Cooke, W. T. Davidite.	134	Description, carbonaceous min., Zeerust, Transvaal (Anderson).	106
Copper.	146	Descriptive Mineralogy [Book] (Bayley).	88
Cordierite, see iolite.		Determination of limiting values of medium refractive index of biaxial crystal (Tsuboi).	105
Coronadite.	105	— specific gravity of mineral fragments by heavy liquids (Graham).	91
Corti, Hercules. Chubutite, new.	103	Developing crystallized mineral specimens (Levison).	14
Corundophilite.	70, 71	Deweyite.	90
Corundum. . . 39, 63, 104, 106, 133, 151		Diabantite.	110
Covellite.	78, 93	Diamond, 19, 64, 86, 87, 134; cleavage, 92; formation, 20, 43; fundamental polyhedron, 18; radiation patterns, 92; —, Jaegersfontein mine, Orange River.	39
Cristobalite.	10, 63, 66, 139	Diarsenides as silver precipitants (Palmer).	29
Critical test of law of valency volumes; structure of alkali sulfates (Ogg, Hopwood).	9	Diaspore[ite].	71
Crookes, Sir William [Obituary].	75	Differentiation of internal structure of silica by Roentgen rays (Kyropoulos).	10
Crookes, Sir William (Kunz).	85	Diopside. . . . 43, 77, 106, 132, 134	
Crookesite.	75	Diopside.	19
Crystal drawing, etc. (Blake).	133	Discovery of a method of arresting decomposition of meteoric irons (Smith).	64
— problems, solving.	44	Dispersion and other optical props., carborundum (Merwin).	20
— structure (Schönflies).	10	— of optic axial angle of monoclinic feldspars (Kôzu).	92
—, aluminium and silicon (Hull).	19	Dodge, Dr. F. D. [Cryst. made by].	101
—, alums and rôle of water (Vegard, Schjelderup).	103	Doelter, C. Compn., pyroxenes.	20
—, ice (St. John).	18	Dolomite, alteration, detection.	20
—, iron (Hull).	19	Double refraction, gems, detn.	26, 75
—, magnesium (Hull).	29		
Crystalline system and axial ratio of ice (Rinne).	18	Eakle, Prof. A. S. [Type spec.].	44
Crystallized specimens, devel.	14	Editorial.	7
Crystallographic studies of barite (Whitlock).	147	Edwards, M. E. Introduction to optical mineralogy [Book].	89
Crystallography and nomenclature of hollandite (Fermor).	105	Egee, Dr. J. B. S. [Min. exhib.].	75
Crystallography of some Canadian minerals (Poitevin).	11, 22, 32, 56	Embolite.	42, 132
Crystalloluminescence (Weiser).	148	Emerald.	19, 128, 129
Crystals, mimetic, classification.	78	Emerson, Prof. B. K. [Paper by].	74
—, speaking.	101		
—, structure of.	18		
Cumberland Falls meteorite (Merrill), 147; (Miller).	147		
Cuprite.	27, 34, 146		
Curtis, T. E. H., collection.	27		
Cyanite, see kyanite.			
Cyanotrichite and diopside from Traversella (Colomba).	19		

- Emery.....69, 70, 71
 Emhardt, Mr. E. C. [Collection] 61
 Enargite.....92
 Enstatite.....64, 147
 Epidesmine, found in Pa.....145
 Epidote, 24, 26, 70, 71, 72, 78, 106, 124
 Epsomite.....105
 Eudialyte.....142
 Eulysite [rock] from Södermanland (Palmgren).....76
 Euxenite.....41, 74, 81, 106
 Evans, J. W. Relation between laws of twinning.....30
- Famous mineral localities,**
 5, 21, 37, 69, 149
 Fayalite, manganiferous.....77
 Fayette Co. Texas meteorite finds distinct falls (Merrill).....64
 Feldspars..11, 22, 77, 78, 104, 106
 — dispersion axial angle..92
 Ferberite.....43
 Fergusonite.....106
 Fermor, L. L. Hollandite.....105
 Ferrier, Dr. W. F. [Ferrierite]. 90
 Ferrierite, a new zeolitic min. from B. C.; notes on other Can. minerals (Graham).....90
 Finkelstein, L. See Quirke, T. T.
 Fletcher, Sir L. [Retirement]...39
 Flint, Geo. M. Beryl Hill, N. H..21
 Flint, rhythmic deposition.....29
 Fluorite 11, 42, 79, 91, 95, 140, 150, 152
 Fluorite from Madoc, Ontario (Walker).....95
 Ford, Mr. H. A. [Min. exhib.]...26
 Formation of diamond (Parsons) 43
 — (Ruff).....20
 — Missouri cherts (Dean). 62
 Forsterite.....63
 Foshag, Mr. Wm. F. [Position] 99
 Foshag, W. F. Yuma Co., Ariz. 149
 Foye, Wilbur G. New occurrence of rhodonite.....124
 Francesconi, L. Radioactivity..148
 Frankenfield, Mr. John [Reports] 90
 Friedelite.....44
 Fromme, J. Gadolinite.....42
 Fuess, Rudolf [Obituary].....88
 Fumarole yielding tenorite and alkali chlorides in lava of Stromboli (Ponte).....19
- Gadolinite, Radauthal, Harz (Fromme).....42
 Gahnite.....124
 Galena, 44, 56, 92, 102, 134, 147, 148
 Gardner, Mr. Harry F. [Position].....131
 Garnet, 19, 63, 72, 73, 74, 77, 106, 124, 132, 142, 146
 Gavelin, A. Hoegbomite, new min. 76
 Gavite, new mineral.....132
 Gems and precious stones, 1917 (Schaller).....30
 Genesis of pleochroic haloes (Joly).....20
 — zinc ores, Edwards District, N. Y. (Smyth).....134
 Geology and ore deposits of Platoro-Summitville Mining District, Colo. (Patton)....78
 George, R. D. Common minerals [Book].....89
 Gill, H. E. See Hamor, W. A.
 Glauberite.....146
 Glauberite crystal cavities in the Triassic rocks, vicinity of Gettysburg, Pa. (Stose)....1
 Glaucophan[e]-ite].....146
 Gmelinite.....74, 112
 Gnomonic projection.....30
 Goethite.....41, 60
 Gold.....73
 Goldschlag, M. See Leitmeier, H.
 Goldschmidt, Prof. Victor [contributions].....23, 40
 Goniometer, evolution [Lecture]. 89
 Gordon, S. G. [Reports, etc., by] 7, 8, 26, 60, 75, 102, 145, 146, 151
 — History of min., Pa...16
 — Evolution of goniometer 89
 Graham, R. P. D. Determination of spec. grav. of min. fragments.....91
 — Ferrierite, new min.; notes on other Canadian min. 90
 — Lattice-like inclusions in calcite, Ontario.....30
 Grandjean, F. Orientation of anisotropic liquids on cryst..148
 Graphic intergrowth, diopside, ilmenite, Rhodesia (Rogers)..106
 Graphite, 90; structure,.....9, 10
 Grating space in halite and sylvite crystals and X-ray wavelengths (Wagner).....9
 Greenockite.....134
 Gruenerite.....77
 Guild, F. N. Microscopic study of silver ores.....29, 133
 Gummite.....133
 Gypsum.....92, 133, 150
- Hagey, Mr. R. J. [Discussions and papers by]...17, 40, 102, 146
 Haidinger's rings in mica (Chinmayanandam).....78
 Halite, 19, 148; grating space,..9
 Hall, Mr. Edmund [Spec. from] 79
 Halogen salts of silver at Wonder, Nevada (Burgess).....42, 132
 Hamor, W. A., and Gill, H. E. New synthesis of phosgenite..106

Handbook of mineralogy, blow-pipe analysis, and geometrical crystallography (Butler) [Rev.]	15	Identity of shattuckite and plancheite (Zambonini)	62
Hanksite	64	——, spangite and phillipsite (Zambonini)	42
Harmotome	103	Illinois: fluorite	42
Hartman, M. L. See Runner, J.		Ilmenite 70, 71, 72, 76, 104, 106,	132
Harvie, Dr. R. [Specimen from]	22	Ilsemanite	44
Hawkins, Dr. Alfred C. [Position]	27	Ingall, Mr. E. D. [spec. coll. by]	24
——. [Minerals exhibited]	59	Interferences of particles in roentgen light (Debye, Scherrer)	9
——. Notes on geol. of R. I.	106	Introduction to optical mineralogy [Book] (Edwards)	89
Helium	13, 151	Inyoite	135, 139
Hematite, 75, 104; ps. goethite,	41	Iodine, diffraction by	92
Hematite and rutile formed by action of chlorine at high temps. (Merwin, Hostetter)	126	Iodobromite, iodyrite	42, 132
Henrich, F. Radioactive min.	91	Iolite [cordierite]	63, 124, 133
Heretofore undescribed meteoric stone from Kansas City, Mo. (Merrill)	147	Iron, crystal structure	19
Hess, Mr. Frank L. [Spec. from]	44	Iron silicate ores in diabase etc., Moravia and Silesia (Kretschmer)	61
Hetaerolite	44	Iron sulfides, structure	18
Heulandite	42, 103	Jadeite	19
Hexagonite (tremolite)	152	Jaeger, F. M. Lectures on symmetry, etc.	150
Hibbenite	63	Jenkins, O. P. Spotted lakes of epsomite, Wash. and B. C.	105
Hidden, William Earl, Reminiscences of. (Kunz)	100, (120)	Johnsen, A. At. changes, bismuth	10
Hidden, William Earl (Kunz)	128, 142	Johnston, Dr. R. A. A. [Analysis by]	32
Hiddenite	129	Joly, J., [member of mission]	15
Hillebrand, Dr. W. F. [Type spec.]	44	——. Pleochroic haloes	20
Hilton, H. Changing planes of projections	30	Jones, Mr. R. W. [spec. coll. by]	67
——. Cleavage angles	30	Julien, A. A. [Obituary]	88
History of mineralogy in Pa. [Abstract] (Gordon)	16	Kaolinite	104
Högbom, Prof. A. G. [Hoegbomite]	76	Keller, Harry F. [Paper by]	102
Hoegbomite, a new rock-making mineral, Lapland (Gavelin)	76	——. New oxychloride of tin	29
Holden, E. F. Limonite pseudo-pyrite, York Co., Pa.	68	Kimberley diamonds, especially cleavage diamonds (Sutton)	92
Hollandite	105	Knabe, Mr. William [Acct. of trip]	102
Holmes, A. Min. class. rocks	20	Knight, Mr. H. P. [Spec. coll. by]	135
Holzman, Mr. John [Paper by]	40	Knopf, A. Strontianite deposits	42
Hopeite	63	Koch, Mr. Louis H. [Discussion, etc., by]	17, 26, 60, 75, 102
Hopwood, F. L. See Ogg, A.		Kôzu, S. Dispersion of optic angles, monoclinic feldspars	92
Hornblende	39, 70, 72, 77, 132	——. Numerical relations of curves of Eifel sandine	105
Hostetter, J. C. [Position]	131	Kraus, Edward H. New mineralogical laboratory, Univ. Mich.	45
——. Apparatus for growing crystals under control	147	Kretschmer, F. Iron silicate ores, Moravia and Silesia	61
——. See also Merwin, H. E.		Kuhara, M. Tear figures on min.	92
Hough, George J. Unlisted min.	146	Kunz, George F. [Gift by]	39
Howes, H. L. See Nichols, E. L.		——. Platinum, 77; precious stones,	19, 63
Hull, A. W. Crystal structure of aluminium, 19; iron, 19, magnesium, 29; silicon	19	Kunz, George F. Reminiscences of William Earl Hidden.	100, (120)
Hutchinson, A. Stereoscopic lantern slides of crystals	40	——. William Earl Hidden 128, 142	
Ice, system, ratio, structure	18		
Idaho: anglesite, 147; leadhillite, linarite, etc.	93		

- . Sir William Crookes... 85
 Kyanite [Cyanite]..... 59, 72
 Kyropoulos, S. Differentiation of silica by roentgen rays..... 10
 Labradorite..... 74
 Lamb, Thomas F., collection... 73
 Lane, Prof. Alfred C. [Position] 131
 Lane, A. C. Mineralogical trip in France..... 140
 Lansfordite..... 146, 152
 Lattice-like inclusions in calcite, Ontario (Graham)..... 30
 Laumontite..... 116, 152
 Leadhillite..... 93, 148
 Lectures on principle of symmetry, and applications [Book] Jaeger..... 150
 LeChatelier, H. [Paper by]... 65, 66
 Lee, O. Ivan, & Wherry, Edgar T. Manganotantalite, Amelia, Va. 80
 Lee, T. H. New zircon minerals 41
 Lee, Mr. William [P.M.S.]... 26, 40
 Lefax [Publication]..... 131
 Leffmann, Dr. Henry [Papers and discussion by] 8, 11, 26, 60, 75, 102, 151
 Leitmeier, H. Pisanite, Carinthia..... 42
 ———, and Goldschlag, M. Xanthosiderite and limonite. 91
 Lepidolite..... 106, 124, 125
 Leucite pseudo. nephelite, Albania (Zambonini)..... 104
 Leucophaenice..... 44
 Leverrierite..... 134
 Levison, Wallace Goold [Withdrawal, discussion]... 7, 59, 60, 74
 Levison, Wallace Goold. Developing crystallized mineral specimens..... 14
 Lewis, Dr. J. Volney [work by].. 1
 Lewis, Mr. W. Scott. [Withdrawal]..... 7
 Liebisch, T. Optical observations on quartz..... 10
 Limonite 41, 56, 60, 68, 91, 93, 132, 141, 152
 Limonite pseudo. after pyrite, York Co., Pa. (Holden).... 68
 Linarite and leadhillite from Idaho (Shannon)..... 93
 Lincio, G. Deposit of stibnite and pyrite, Sardinia..... 63
 Lindgren, W. Mineral deposits. 150
 Lingen, J. S. v. d. Radiation patterns of magnesium hydroxide, serpentine, apophyllite, diamond, iodine, etc..... 92
 Loangbanite..... 76
 Loellingite..... 29
 Lorettoite..... 103
 Loughlin, G. F. Oxidized zinc ores, Leadville, Colo..... 64
 Luminescence, zircon (Venable). 44
 Lupton, H. See Newbury, E.
 Mackensen, General [Mackensite]..... 61
 Mackensite, new mineral..... 61
 Mackintoshite..... 142
 Magnesium, crystal structure... 29
 Magnetite 41, 43, 61, 70, 76, 104, 106, 124, 132, 133, 145
 Maine: mineral localities..... 73
 Malachite..... 70, 92, 146, 148
 Manchester, Mr. James G. [Specimens, gifts, etc.]... 31, 39, 59
 Manchester, James G. Minerals of the Bergen Archways..... 107
 Manganfayalite [new variety]... 77
 Manganite..... 30, 134
 Manganosite..... 44
 Manganotantalite from Amelia, Va. (Lee and Wherry)..... 80
 Manual of chemical analysis of rocks [Book] (Washington)... 150
 Manzella, E. Melanophlogite... 63
 Marc, Robert [Obituary]..... 88
 Marcelin, Rene. Crystals in thin plates: molecules..... 148
 Margarite..... 70, 71, 151
 Martin, Dr. James C. [Position] 61
 Massachusetts: asbestos, etc., 37; datolite, etc., 5; emery, etc., 69; pelhamite, analysis... 38
 Maucherite..... 29
 Mawson, D. Mineral notes... 133
 McKinnon, Mr. A. T. [Spec. coll. by]..... 12
 Means of solving crystal problems (Blake)..... 44
 Measurements of radioactivity of meteorites (Quirke and Finkelstein)..... 19
 Melaconite..... 146
 Melanophlogite..... 63
 Melilite..... 104
 Menaccanite, see ilmenite.
 Merrill, George P. Cumberland Falls meteorite; meteoric stone, Kansas City, Mo..... 147
 ———. Fayette Co. Tex. meteorite finds distinct..... 64
 ———. Percentage number of meteorite falls and basicity... 78
 Merwin, H. E. Dispersion, etc., of carborundum..... 20
 Merwin, H. E. and Hostetter, J. C. Hematite and rutile formed by chlorine at high temperatures..... 126
 ———. See also Rankin, G. A.
 Mesosiderite-grahamite group of

- meteorites, with analyses of four (Prior)..... 29
- Metaheawettite..... 74
- Meteorites: Amana [Homestead], 30; Cumberland Falls, 147; Eagle Station, 30; Fayette Co., Texas, 64; Hainholz, 29; Kansas City, Mo., 147; Powdermill Creek, 29; Richardton, 78; Simondium, 29; whitelyites 147
- , arresting decomposition of, 64; list of those described by Hidden, 142; percentage of falls and finds and basicity, 78; radioactivity.... 19
- Method of detg. refractive index of solids and liquids (Clay).... 20
- Meyerhofferite..... 139
- Mica..... 20, 63, 148
- Michigan, University of, new mineralogical laboratory..... 45
- Microcline..... 74, 90, 120
- Microscopic study of silver ores, etc. (Guild)..... 29, 133
- Microstructure of titanite iron ores (Warren)..... 104
- Middlemass, C. S., and Parshad, L. J. Aquamarine mines, India..... 78
- Miers, Henry A. [on mission].. 15
- , Old and new mineralogy..... 62
- Miller, Arthur M. Cumberland Falls meteorite..... 147
- Miller, Benj. L. and Singewald, J. T. Mineral deposits of S. America [Book]..... 72
- Miller, Mr. T. I. [Min. exhib.] 60, 74
- Mimetite..... 64
- Minasragrite..... 74
- Mineral deposits [Book] (Lindgren)..... 150
- Mineral deposits of South America [Book] (Miller, Singewald) 72
- Mineral notes (Mawson)..... 133
- Mineralogical character of "turrite," etc. (Spencer)..... 41
- , classification of igneous rocks (Holmes)..... 20
- Mineralogical Society [London]. 40
- , of America, proposed..... 16
- Mineralogical trip in France, A. (Lane)..... 140
- Mineralogy of the H. B. mine, Salmo, B. C. (Walker)..... 63
- Minerals, new: Chubutite, 103; cocinerite, 146; ferrierite, 90; gavite, 132; hoegbomite, 76 mackensite, 61; manganfayalite, 77; olivieraite, 41; pruetite, 152; orvillite, 41; racewinitite, 28; sobralite, 76; viridite, 61; zebedassite..... 120
- Minerals of the valley of Gava, etc.; gavite (Repossi)..... 132
- Minerals of the Bergen Archways, The. (Manchester).... 107
- Missouri: barite, 106; chert..... 62
- Molecular destruction of kaolinite by heat (Sokolov)..... 104
- Molybdenite..... 44, 91, 103, 124
- Monazite..... 106, 123, 124, 128, 133
- Monazite from Boothwyn, Pa. (Wherry)..... 123
- Monoclinic selenates of the iron group (Tutton)..... 62
- Montana: periclase..... 43
- Moravite..... 61
- Moschetti, L. Probable identity of peganite and variscite. 106
- Muscovite..... 106, 124, 148
- Natrolite..... 102, 103, 116
- Natural frequencies of sulfates, carbonates; infra-red radiation (Schaefer, Schubert).... 10
- Nature of water of zeolites (Stoklossa)..... 103
- Nenadkevich, K. A. Bismuth min. 29
- Neolite..... 120
- Nephelite..... 104
- Nesquehonite..... 146, 152
- Neumann, B. Black sulfur..... 42
- Nevada: embolite, iodobromite, iodyrite..... 42, 132
- New Hampshire: beryl..... 21
- New Jersey, various minerals, 40, 44, 107; analcite, 112; apophyllite, 74, 115; aragonite, 75; barite, 4; calcite, 74, 111; chalcopyrite, 110, 116; datolite, 113; diabantite, 110; gmelinite, 74, 112; laumontite, 116; natrolite, 116; pectolite, 112; pyrite, 110; quartz, 111; sphalerite, 111; stilbite, 116; thaumasite, 64; vivianite.... 75
- New mineralogical laboratory at the University of Michigan, The. (Kraus)..... 45
- New minerals. See minerals, new
- New occurrence of rhodonite, A. (Foye)..... 124
- , silicate of lead and zinc (Van der Meulen)..... 30
- , synthesis of phosgenite (Hamor and Gill)..... 106
- New York: garnet, 74; quartz, star, 59; zinc ores, genesis and associated minerals..... 134
- New York City: pyrite..... 31
- New York Mineralogical Club, 59, 74, 89, 100, 151

Newark Mineralogical Soc....	40, 152	Orientation of anisotropic liquids on crystals (Grandjean) .	148
Newbury, E. and Lupton, H. Radioactivity and color...	78	Origin of serpentine (Benson) ..	44
Newspaper mineralogy	13	Orpiment	148
Nicolite	29	Orthoclase.....12, 74, 106,	124
Nichols, E. L., and Howes, H. L. Phosphorescent calcite.....	105	Orueteite, new mineral	152
———— Photoluminescence and cathodolum., calcite	105	Orvillite, new mineral.....	41
———— Types of phosphorescence	148	Owen, E. A. See Burdick, C. L. Oxidized zinc ores of Leadville, Colorado (Loughlin).....	64
Nickles, John M. Bibliography N. A. geology, 1916, 62; 1917,	103	Palmer, Chase. Diarsenides as silver precipitants.....	29
Nicol, Prof. William [Spec. from]	65	Palmer, Mr. Wm. T. [paper by] .	74
Nicolson, A. McL. Speaking crystals [Lecture] 101; [N.Y. M. C.]	151	Palmgren, John. Eulysite [rock] ..	76
Niggli, P. Struct. of crystals ..	18	————, Manganfayalite, [new variety].....	77
North Dakota: meteorite.....	78	Palygorskite.....	11
Note on aquamarine mine, India (Middlemass and Parshad) ..	78	Parahopeite.....	63
———— fundamental polyhedron of diamond lattice (Adams) ..	18	Paramorphs.....	139
———— phosphorescent calcite (Nichols and Howes).....	105	Parshad, L. J. See Middlemass, C. S.	
———— unlisted mineral (Hough)	146	Parsons, C. A. Formation of diamond	43
Notes on mimetite, thaumasite, and wavellite (Wherry).....	64	Patton, H. B. Geol. of Platoro Summitville Dist., Colorado .	78
———— formation of minerals about glass furnaces (Wilson) .	104	Pearls	19, 64
———— geology of Rhode Island (Hawkins)	106	Pectolite.....	112
———— origin of colerainite (Poitevin)	63	Peganite [distinctness doubted].	106
Noteworthy occurrence of biotite mica (Stanley)	134	Pegmatite origin for molybdenite ores (Thomson).....	103
Numerical relations between Et EA curves of Eifel sanidine (Kôzu)	105	Pelham asbestos mine, Mass., The (Shannon)	37
Occurrence, chem., met., uses, tungsten (Runner, Hartman) ..	77	Pelhamine, 37; pelhamite.....	38
———— of radioactive minerals in S. Africa (Rogers).....	106	Penfieldite [erroneous ident.] ..	64
Octahedrite	133	Pennsylvania: various minerals, 89, 90, 102, 145-6; anglesite, 89, 147; chabazite, 26; columbite, 121; epidemine, 145; glauiberite crystal cavities, 1; limonite pseudo pyrite, 68; monazite, 123; wavellite, 64; wulfenite, 26; history of mineralogy,	16, 75
Ogg, A., and Hopwood, F. L. Test of cryst. law; structure of alkali sulfates	9	Percentage number of meteorite falls and finds and varying basicity (Merrill).....	78
Old and new mineralogy (Miers)	62	Periclafe[ite].....	43, 63
Oldach, Mr. Fred. [min. exh.] ..	26	Phenacite	91
Oligoclase.....	71, 124	Philadelphia Mineralogical Soc. 8, 16, 26, 40, 60, 75, 89, 102, 145,	150
Oliveira, Dr. F. de P. [Oliveiraite]	41	Phillips, Prof. A. H. [Paper by]	89
Oliveiraite, new mineral	41	Phillipsite.....	42
Olivine.....26, 37, 64, 72,	147	Phlogopite.....11, 90, 134,	148
Opal.....19, 32, 44, 59,	64	Phosgenite, synthesis.....	106
Optical behavior of water of hydration (Schaefer, Schubert) ..	10	Photoluminescence and cathodoluminescence of calcite (Nichols and Howes)	105
———— fluorite in southern Illinois (Pogue).....	42	Picrolite	72
———— observations on quartz (Liebisch).....	10	Pisanite from Lading, Carinthia (Leitmeier).....	42
		Planchéite.....	62

- and shattuckite, copper silicates, not the same mineral (Schaller)..... 62
- Platinum, 128; —, (Kunz)..... 77
- Pleochroic haloes..... 20
- Pleonaste..... 76
- Pogue, Dr. Joseph E. [Position]..... 88
- Optical fluorite, Ill.... 42
- Poitevin, Eugene. Crystallography of Canadian minerals, 11, 22, 32, 56
- Origin of colerainite... 63
- Polycrase..... 13, 81
- Ponte, G. Anhydrite, Stromboli 42
- Fumarole, tenorite and alk. chlorides, Stromboli.... 19
- Porcellophite..... 63
- Practical applications of crystallography [Lecture] (Wherry) 60, 151
- Precious stones (Kunz)..... 19, 63
- Prehnite..... 42, 78
- Priceite..... 139
- Prior, G. T. Mesosiderite-grahamite meteorites, with anal. 29
- Compn. of meteorites. 30
- Progress of mineralogy, 1864-1918..... 42
- Probable atomic changes of bismuth during rearrangement (Johnsen)..... 10
- identity of peganite with variscite (Moschetti)..... 106
- Production of precious stones for 1917 (Kunz)..... 63
- Proustite..... 27
- Psilomelane[-ite]..... 105
- Pumpelly, Raphael. [Collection] 61
- Pyrite, 18, 28, 31, 44, 63, 67, 68, 71, 92, 99, 102, 110, 132, 134, 145, 152
- Pyrite crystals from Bald Mountain, Colo. (Whitlock)..... 67
- Broadway and 207th St., N.Y. City (Whitlock) 31, 99
- Pyrolusite from Virginia (Watson and Wherry)..... 30
- Pyromorphite..... 27, 56, 89, 102, 148
- Pyrophyllite..... 148
- Pyroxenes..... 12, 13, 20, 43, 64, 76
- Pyroxmangite..... 77
- Pyrrhotite..... 43
- Quartz, 10, 22, 32, 40, 42, 44, 59, 66, 73, 74, 78, 90, 92, 102, 104, 106, 111, 125, 141, 145, 150
- Quirke, T. T. Richardton meteorite..... 78
- and Finkelstein, L. Radioactivity of meteorites..... 19
- Racewinite, a peculiar mineral from Utah (Winchell).... 28
- Radioactive minerals in Bavaria (Henrich)..... 91
- Radioactivity and the coloration of min. (Newbury, Lupton)..... 78
- of Italian minerals (Francesconi)..... 148
- Radiation pattern of the transformation of magnesium hydroxide to oxide; serpentine, malachite, pseudomorphous quartz; Bultfontein apophyllite; diamond tests; diffraction from plate of iodine (Lingen). 92
- Rankin, G. A., and Merwin, H. E. Ternary system $MgO-Al_2O_3-SiO_2$ 63
- Refraction, double, detg..... 26, 75
- Refractive indices, detn..... 20, 105
- Relation between different laws of twinning that result in the same crystal (Evans)..... 30
- of sphalerite to other sulfides in ores (Teas)..... 43
- Reminiscences of William Earl Hidden (Kunz)..... 100, (120)
- Reply to Dr. Tutton's discussion of the assignment of crystals to symmetry classes (Wherry)..... 134
- Repossi, F. Minerals of the valley of Gava; gavite, new min. 132
- Review of progress of mineralogy, 1864-1918 (Prior)..... 42
- Rhode Island: minerals, geology. 106
- Rhodochrosite..... 27
- Rhodolite [garnet]..... 142
- Rhodonite..... 44, 77, 124
- Rhythmic deposition of flint (Cole) 29
- Richardton meteorite (Quirke). 78
- Rimann, E. Chubutite..... 103
- Rinne, F. Cryst. system of ice.. 18
- Rodd, E. H. Zirconia as refract 104
- Roebbling, Col. W. A. [Gift from] 39
- Roentgenograms of crystal twins (Van der Veen)..... 9
- Rogers, Prof. A. F. [Position].. 131
- American occurrence of periclase; brucite rocks..... 43
- Rogers, Austin F. Colemanite pseudomorphous after inyoite, from Death Valley, Cal. 135
- Rogers, A. W. Graphic intergrowth, diopside and ilmenite. 106
- Radioactive minerals. 106
- Romanéchite..... 105
- Rothermel, Mr. J. G. [Paper by] 8
- Rowlandite..... 142
- Rubellite [tourmaline]..... 19, 26
- Rubies, S. P. de. Orueteite... 152
- Ruby [corundum]..... 19
- Ruff, Otto. Formation of diamond..... 20

Runner, J. J. and Hartman, M. L. Occurrence, etc., of tungsten.....	77	Sobral, Prof. J. M. [Sobralite].	76
Rutile, ... 71, 104, 126, 127, 134, 142		Sobralite, new mineral.....	76
Safflorite.....	29	Sodalite.....	73
Samarskite.....	87, 124	Sokolov, A. M. Molecular destruction of kaolinite by heat.	104
Sanidine [feldspar].....	104, 105	South America, mineral deposits	72
Saponite.....	91	South Carolina: barite.....	147
Sapphire [corundum].....	19	South Dakota: minerals.....	77
Sargent, H. C. Axinite veins..	78	Space lattice of Al. (Scherrer).	19
Scapolite.....	12, 13	Spangite, shown to be phillipsite.	42
Schaffer, C., and Schubert, M. Sulfates and carbonates, infrared radiations.....	10	Speaking crystals (Nicolson)...	101
———. Optical behavior of water of hydration....	10	Specific gravity, determination.	91
Schaller, Waldemar T. Gems and precious stones, 1917.....	30	Spencer, L. J. Min. characters of "turite;" iron ores, N. S....	41
———. Planchéite and shattuckite not same mineral.....	62	Spencerite.....	63
Scheelite.....	44, 106, 152	Sperryllite.....	142
Scherrer, P. Space lattice, Al..	19	Sphalerite 43, 56, 75, 92, 102, 111, 124, 134, 148	
———. See also Debye, P.		Sphene, see titanite.	
Schjelderup, H. See Vegard, L.		Spinel.....	43, 63, 76, 133
Schönflies, A. Crystal structure	10	Spodumene.....	72, 106
Schoeller, W. R. Analysis of minerals of rarer elements...	150	Spotted lakes of epsomite in Wash. and B. C. (Jenkins)...	105
Schofield, Mr. S. J. [min. coll. by]	56	St. John, A. Crystal structure of ice.....	18
Schoonmaker, Mr. [Paper by].	40	Stalactitic barite from Madoc, Ontario (Walker)	79
Schubert, M. See Schaefer, C.		Stanley, E. R. Occ. of biotite.	134
Schumoff-Deleano, Vera. Synthetic expts. in pyroxene group	43	Stannite, structure.....	18
Schungite.....	106	Stanton, Mr. Gilman S. [Gift from] 39; ——— (minerals exhibited by).....	59
Scolecite.....	103	Staurolite.....	19, 59
Scott, Mr. George S. [Note by]	27	Stephanite.....	22
Selenite.....	44	Stereographic projection.....	30
Serpentine. 44, 72, 92, 120, 134,	145	Stereoscopic lantern slides of crystal pictures (Hutchinson).	40
Shannon, Mr. Earl V. [Position]	61	Stewartite.....	92
———. Anglesite, Idaho.....	147	Stibiotantalite.....	81
Shannon, Earl V. Chester Emery Mine.....	69	Stibnite.....	63, 92
———. Datolite locality near Westfield, Mass.....	5	Stilbite.....	90, 102, 116
———. Linarite and leadhillite from Idaho.....	93	Stoklossa, C. Water in zeolites.	103
———. Pelham asbestos mine	37	Stolzite.....	27
Shattuckite.....	62	Stose, George W. Glauberite crystal-cavities, Pa.....	1
Siderite.....	41	Strengite.....	145
Silica, structure.....	10, 18	Strickland, Mr. F. E. [spec. from].....	125
Silicon, crystal structure.....	9, 19	Strontianite deposits near Barstow, Cal. (Knopf).....	42
Sillimanite.....	59, 63, 104, 133	Structure of crystals (Niggli)...	18
Silver.....	26, 146	———. in extremely thin plates; new detn. of molecular magnitude (Marcelin).....	148
Singewald, J. T. See Miller B. L.		———. of crystalline forms of silica, iron and zinc sulfides, calcium carbonate (Beckenkamp)	18
Sir William Crookes (Kunz).....	85	Sulfates, alkali, structure.....	9
Smaltite.....	29	Sulfohalite.....	142
Smith, Isabel F. Columbite crystal from Boothwyn, Pa.....	121	Sulfur.....	43, 78, 133, 134
S[mith], G. F. H. Arresting decomposition of meteoric irons.	64	Sutton, J. R. Kimberley diamonds, etc.....	92
Smithsonian Institution [coll.].	44		
Smyth, C. H., Jr. Zinc ores, N. Y.	134		

- Sylvite 19, 134, 148; grating . . . 9
 Synthetic expts. in the pyroxene group (Schumoff-Deleano) . . . 43
 Talc 71, 90, 132, 134, 148
 Tantalite 106
 Tapiolite 73
 Tarr, W. A. Barite deposits, Mo. 106
 Tear figures on min. (Kuhara) . 92
 Teas, L. P. Relation of sphalerite to other sulfides in ores . . . 43
 Tenorite 19
 Ternary system $MgO-Al_2O_3-SiO_2$ (Rankin and Merwin) 63
 Tetrahedrite 44
 Texas: helium, 13; mercury mines 125
 Text-book of precious stones (Wade) [Review] 26
 Thallium, volcanic minerals, etc. 133
 Thaumassite 64, 91
 Thenardite 105
 Thioarsenides of the Binnenthal (Brun) 133
Thomas F. Lamb Collection, The. (Wigglesworth) 73
 Thomas, K. and Apgar, F. W. Approx. detn. of min. in concentrates 62
 Thompson, Col. Wm. B. [Gift] 39
 Thomson, E. Pegmatite, molybdenite 103
 Thorogummite 142
 Thuringite 61
 Tin, new oxychloride of 29
 Titanite . 12, 26, 90, 123, 132, 133
 Topaz 73
 Torbernite 91, 124, 133
 Tourmaline, 63, 70, 71, 73, 100, 124, 133, 151
 Tremolite 134, 151
 Tridymite 63, 104, 139
Tridymite crystals in glass (Bowen) 65
 Triplite 124
 Trudell, Mr. Harry W. [Reports of trips, etc.], 7, 75, 90, 146
 Tsuboi, S. Detn. of limiting values of refr. index, etc. 105
 Tungsten, atoms in 18
 Turgite ["turite"] 41
 Tutton, A. E. H. Monoclinic selenates of the iron group . . . 62
 ———. X-ray analysis and the assignment of crystals 134
 ———. X-ray analysis and topic axes of alkali sulfates . . . 9
 Twin crystals 9, 30
 Two new zircon minerals, orvillite and oliveiraitite (Lee) 41
 Types of phosphorescence (Nichols and Howes) 148
 Uhlig Dr. J. [obituary] 152
 Unusual sulfur cryst. (Bichowsky) 78
 Uraninite 124, 151
 Utah: metaheawettite, 74; mimetite, 64; periclase, 43; racewinite [new mineral] 28
 Uvanite 44
 Valiant, Mr. W. S. [Identification of crystal cavities by] . . . 1
 Van der Meulen, P. A. New silicate of lead and zinc 30
 Van der Veen, A. Roentgenograms 9
 Variscite 44, 106
 Vegard, L., and Schjelderup, H. Crystal structure of alums; water of crystallization 103
 Venable, F. P. Luminescence of zircons 44
 Vesuvianite 44, 132
 Virginia: manganotantalite, 80; pyrolusite, 30; staurolite 59
 Viridite, new mineral 61
 Vivianite 75, 92
 Wade, Frank B. Text of precious stones [Review] 26
 Wagner, E. Grating space in halite and sylvite, etc. 9
 Walker, Mr. James [Min. exhib.] 60
Walker, T. L. Fluorite from Madoc, Ontario 95
 ———. Mineralogy of the H. B. mine, Salmo, B. C. 63
 ———. Stalactitic barite from Madoc, Ontario 79
 Walther, Paul [paper by] 152
 Warford, Mr. H. [Min. exhib.] 60, 75
 Waring, Mr. C. A. [Spec. from] 135
 Warren, C. H. Microstructure of titanite iron ores 104
 Washington: epsomite, thenardite 105
 Washington, Henry S. [Typespec.] 44
 ———. Rational analysis, clays 104
 ———. Manual, analysis, rocks 150
 Watson, Thomas L., and Wherry Edgar T. Pyrolusite from Va. . . . 30
 Wavellite 64, 145
 Weidhaus, Mr. Ernest [N. Y. M. C. member] 100, 151
 Weiser, H. B. Crystalloluminescence 148
 Wernerite 90, 106
 Wherry, Edgar T. [Editorial work] 7
 ———. Assignment of crystals to symmetry classes; Reply to Dr. Tutton's discussion . . . 134

Wherry, Edgar T. Chalcopyrite cryst., Bergen Archways. . .	116	Wulfenite.	26, 102, 148, 149
——. Monazite, Boothwyn, Pa. . .	123	Xanthosiderite from Schendlegg, Lower Austria; formation of botryoidal limonite (Leitmeier and Goldschlag).	91
——. Notes on mimetite, thaumasite, and wavellite. . .	64	X-ray analysis and the assignment of crystals to symmetry classes (Tutton).	134
——. Practical applications of crystallography [lect.]. . .	60, 151	——. topic axes of alkali sulfates and their bearing on the theory of valency volumes (Tutton).	9
—— and E. Q. Adams. Classification of mimetic crystals. . .	78	X-rays and the structure of crystallized and amorphous carbon (Anonymous).	10
——. See also Lee, O. Ivan; also Watson, Thomas L.		Young, R. B. Alteration, dolomite.	20
Whitlock, Herbert P. Collection of Am. Mus. Nat. History . .	96	Yttrialite.	142
——. [Exhibition of min. etc., by].	4, 59, 60, 74, 89	Yuma County, Arizona (Foshag)	149
——. Crystallographic studies of barite.	147	Zambonini, F. Identity of shattuckite and planchéite.	62
Whitlock, Herbert P. Pyrite crystals from Bald Mt., Colo. . .	67	——. Identity of spangite with phillipsite.	42
——. Pyrite crystals, Broadway and 207th St., N. Y. City, 31, 99		——. Leucite pseudo. nephelite from Albania.	104
Whitneyite [distinctness questioned].	91	Zebedassite, a new hydrous silicate of aluminium and magnesium from Zebedassi, Pavese Apennines (Brusoni).	120
Wick, Prof. F. G. [research]. . .	152	Zeolites.	72, 90, 103, 141, 145
Wigglesworth, Edward. Thomas F. Lamb collection.	73	Zeunerite.	133
Willemite.	44	Ziegler, Prof. Victor [Position]. . .	88
Wilson, Ernest H. Barite from Great Notch, N. J.	4	Zinc sulfide, structure.	18
Wilson, G. V. Formation of minerals about glass furnaces. . .	104	Zincite.	44
Wilson, Dr. M. E. [Spec. coll. by].	11, 13	Zircon.	26, 44, 63, 90, 104, 120, 124
Winchell, A. N. Racewinite, a peculiar mineral from Utah. . .	28	Zircon[ium] minerals, two new. . .	41
Winchell, H. V. [Racewinite named after his cable address]. .	28	Zirconia as a refractory (Rodd). . .	104
Wintringham, Mr. J. P. [Minerals exhibited, etc.]. . .	60, 74, 89, 101	Zoisite.	72
Wollastonite.	90, 104		
Wright, Dr. Fred. E. [Paper by]	74		

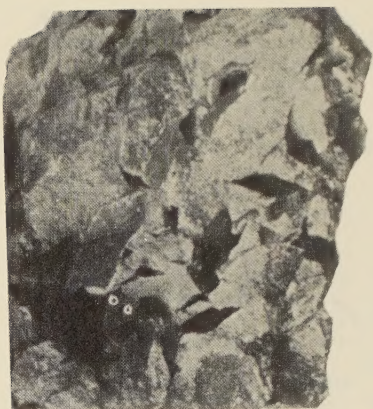
ERRORS IN VOLUME 4.

- No. 3—p. 27: 12th line from bottom, for Grenzi read Grenzig.
p. 29: 2nd line of 4th abstract, for 1817 read 1917.
- No. 9—p. 119: 18th line, for An anonymous poet read Alexander Pope.
- No. 11—p. 131: 14th line, for doubtfully read doubtfully.
p. 139: 22nd line, for n_2n_b read $n_2(n_b)$.
p. 142: 1st line of list of meteorites, for Clebourne read Cleberne.
p. 144: 9th line of list, for 249 read 250.
17th line from bottom, for 505 read 501.
11th line from bottom, for 34 read 39.
5th line from bottom, omit 254.

MINERALOGICAL SOCIETY OF AMERICA.

A full account of the organization meeting, held in Cambridge, Mass., December 30, 1919, will be published in the January issue of this magazine.

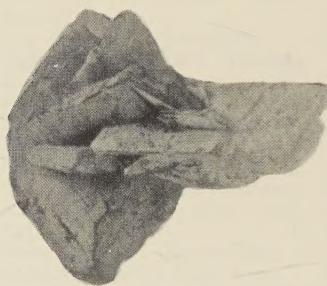
PLATE 1.



3



2



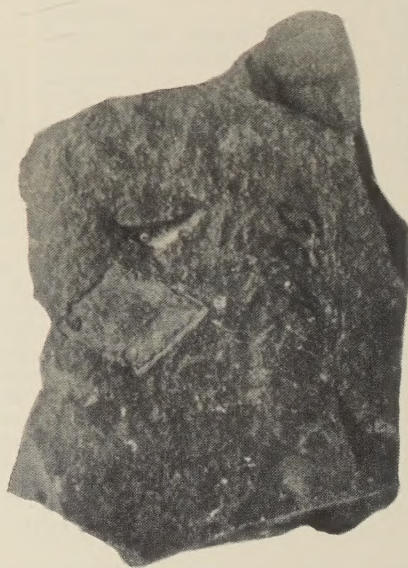
6



5



4



1

For explanation see page 1.